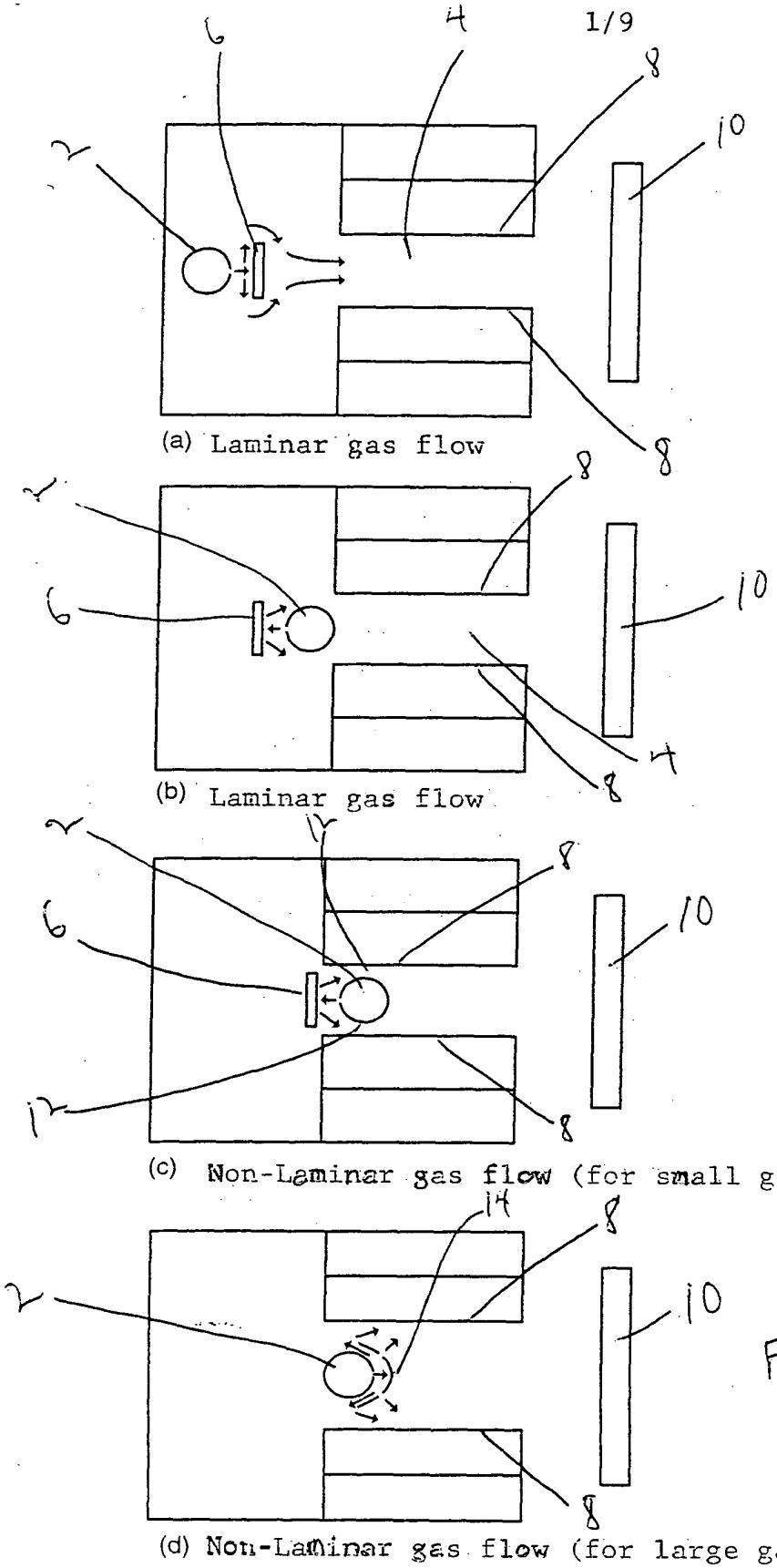


Title: HOLLOW CATHODE SPUTTERING APPARATUS AND RELATED METHOD

First Named Inventor: Alan E. Delahoy

Application Serial No.: / Atty. Docket No.: ENPI 0101 PUS

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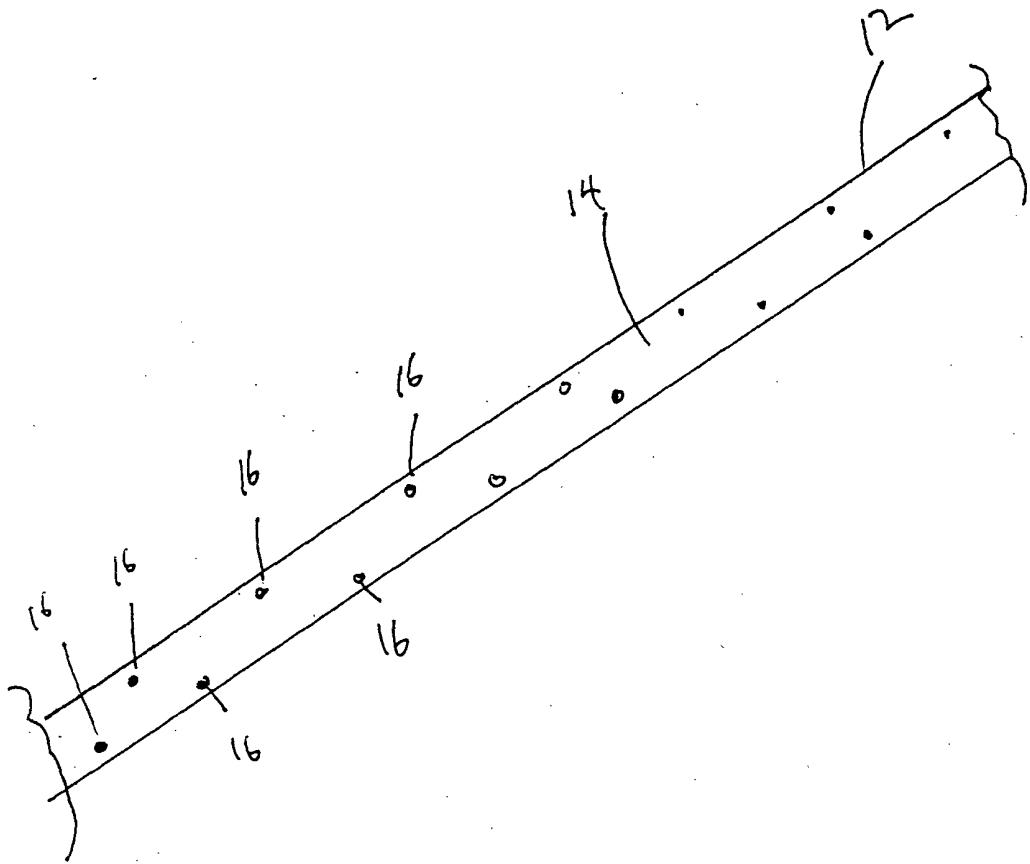


Figure 2

Title: **HOLLOW CATHODE SPUTTERING APPARATUS AND RELATED METHOD**

First Named Inventor: Alan E. Delahoy

Application Serial No.: / Atty. Docket No.: **ENPI 0101 PUS**

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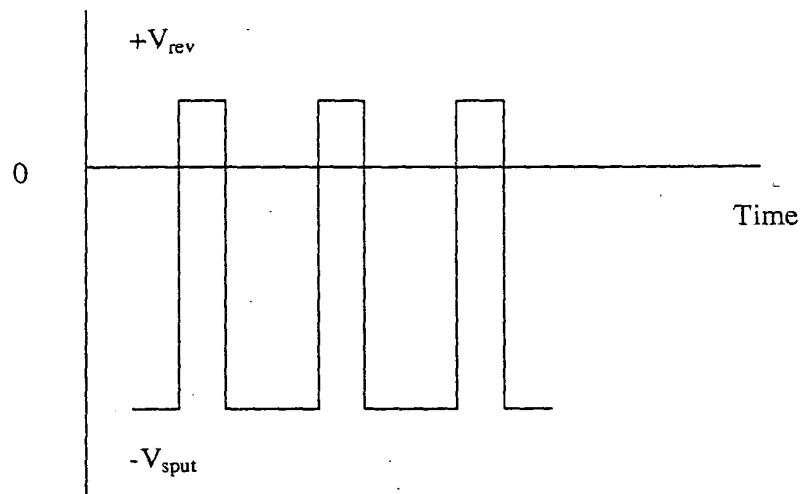


Figure 3

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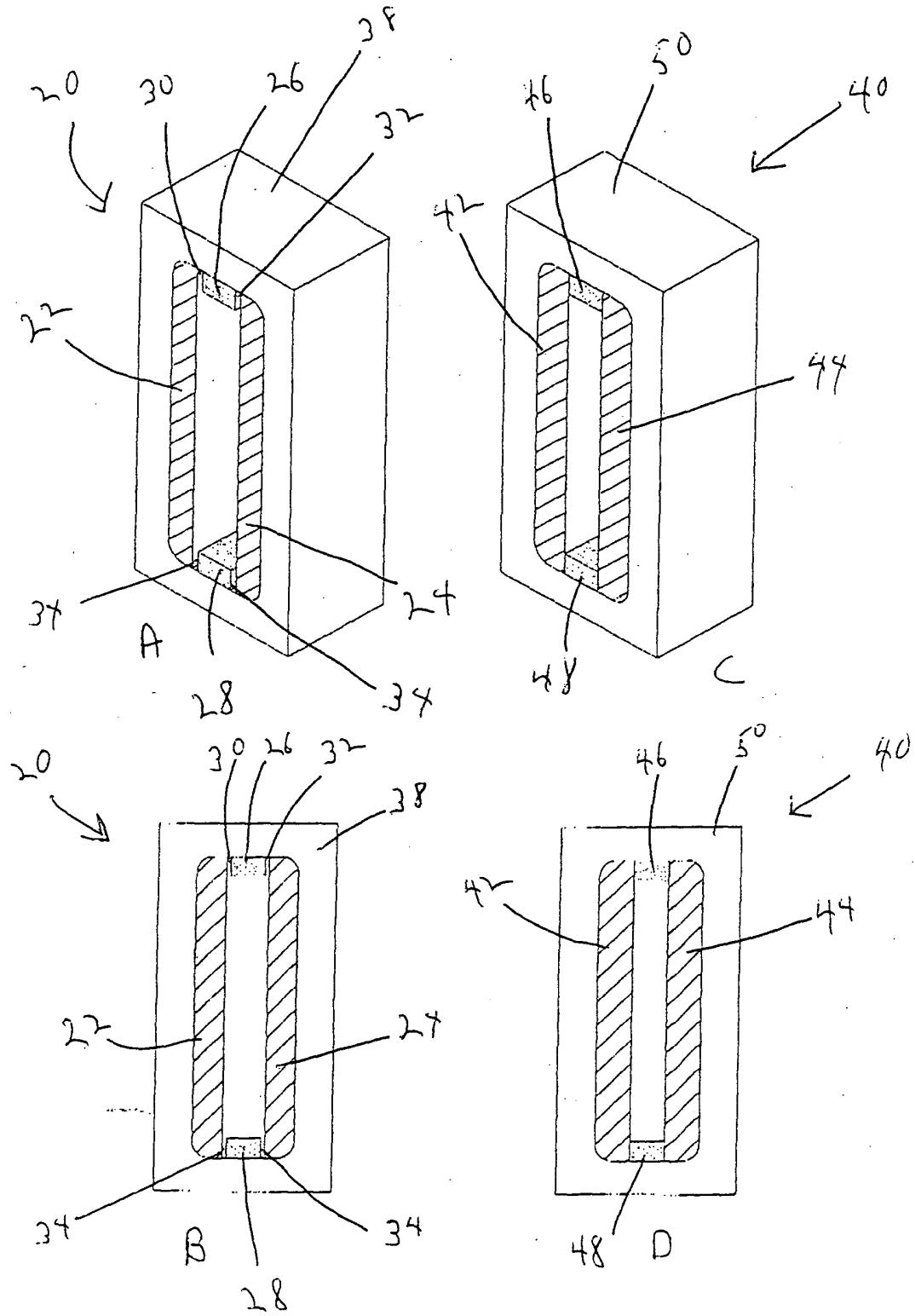


Figure 4

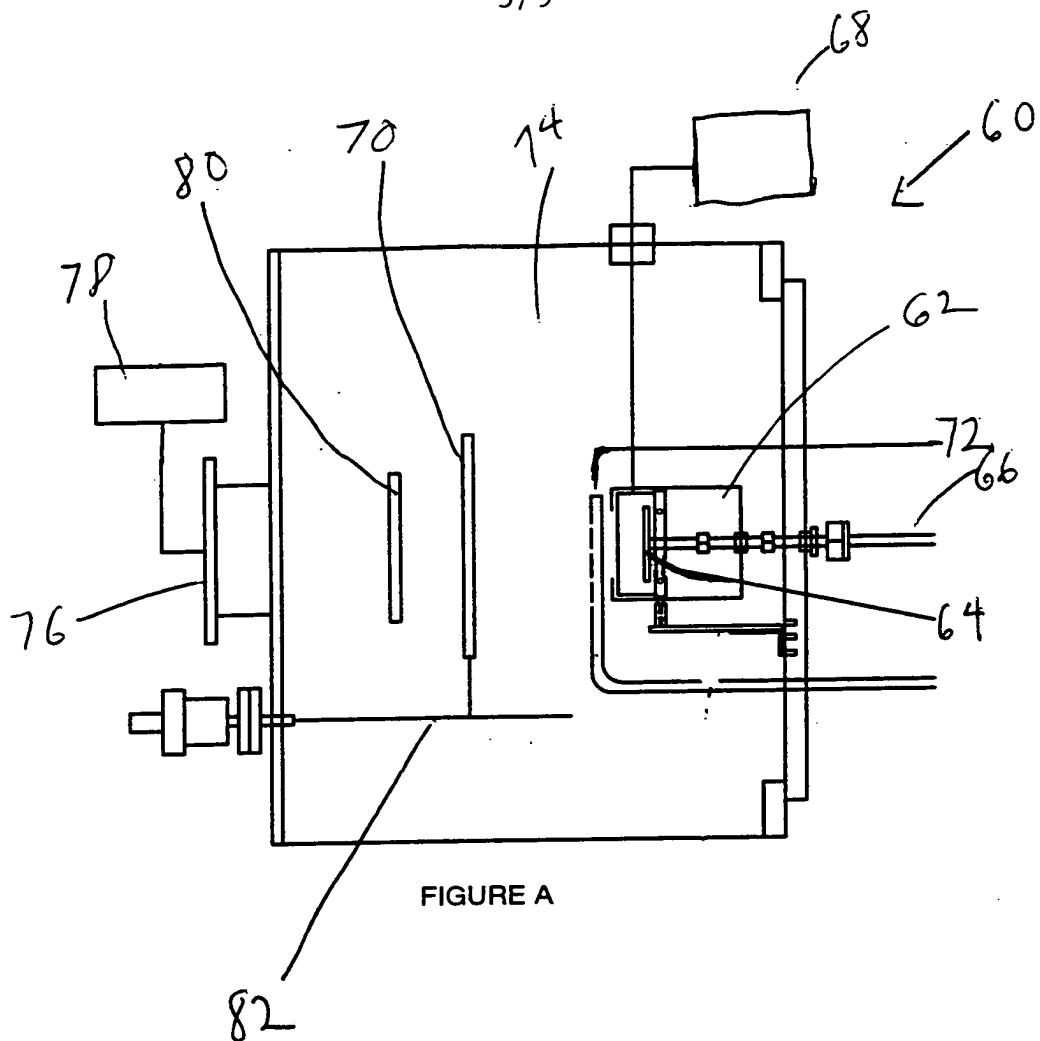


Figure 5A

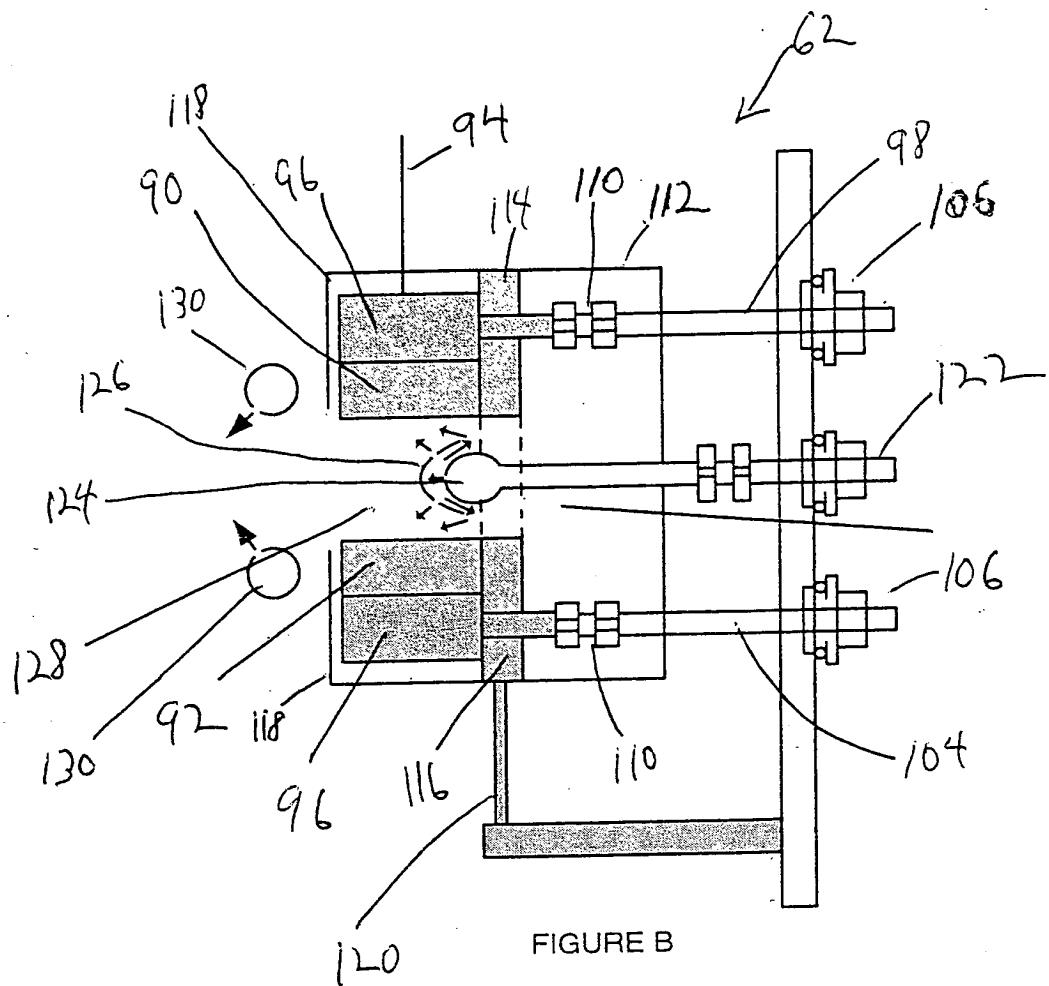
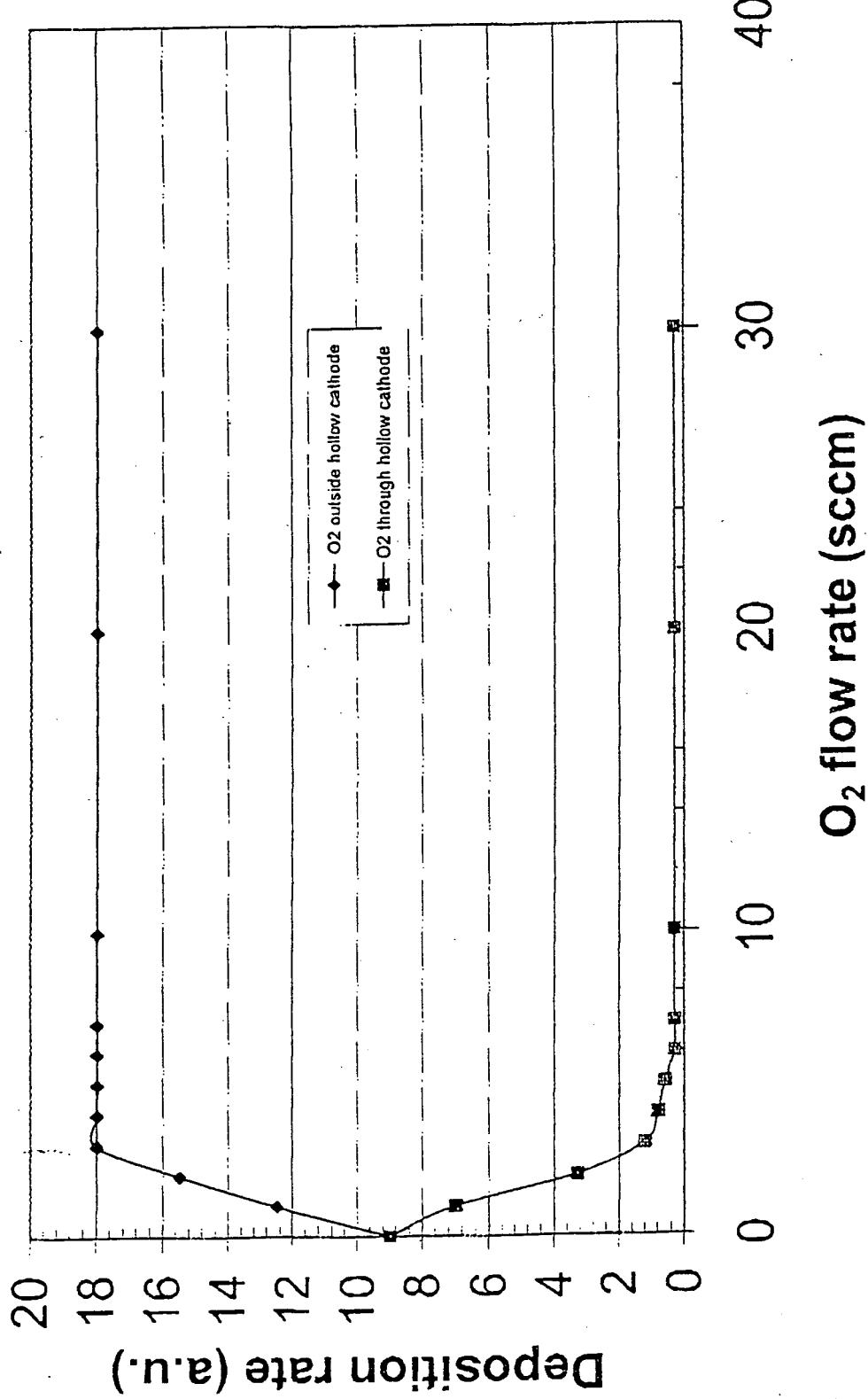


FIGURE B

Figure 5B

Figure 6

Comparison of deposition rate for O<sub>2</sub> injected outside the hollow cathode and for O<sub>2</sub> passing through the hollow cathode (Ar 4s/cm,  
300W, 250mTorr)



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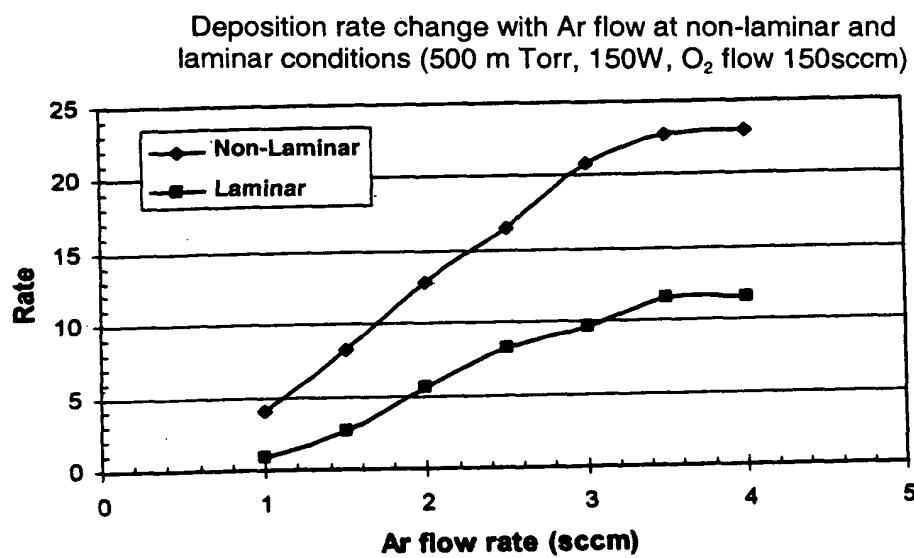


Figure 7

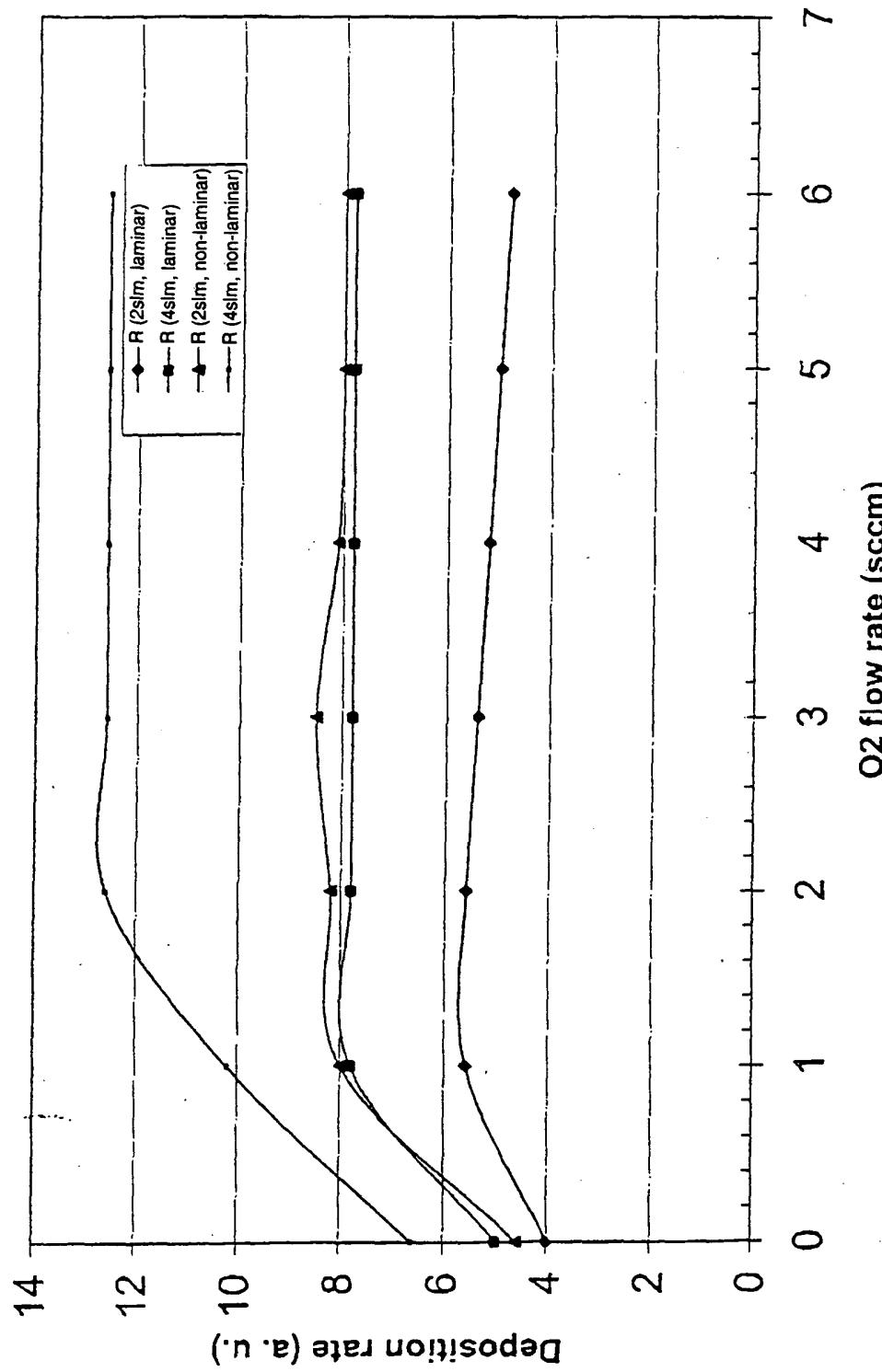
Film deposition rate vs O<sub>2</sub> flow rate with non-laminar and laminar Ar flow (Al target, 300W, 500m Torr)

Figure 8